

## CLAIMS

1. An information distribution system that distributes each information material from an information distribution server to  
5 an information demand terminal via an information network, where the system comprises

a means for managing the number of distributions, where the means stores the planned number of distributions during a period of time for each information material, the actual number of  
10 distributions already made for each information material, and the remaining number of distributions for each information material, which is the difference between these two numbers of distributions,

a means for generating an advertising list, where the means  
15 generates an advertising list for extraction, in which the extraction probability for each information material in the case of random extraction is the ratio of the remaining number of distributions for each information material to the accumulated total of the remaining number of distributions for each  
20 information material at that point in time,

a means for handicap application, which, when performing random extractions, applies a handicap each time to the remaining number of distributions of each information material comprised by the advertising list, so that the mean extraction  
25 probability is maintained over the time period, while causing deviation in the extraction probability distribution at each random extraction, and

a means for random extraction, where the means performs random extractions with respect to the advertising list, based  
30 on the remaining number of distributions of each information material to which a handicap has been applied, so as to extract one information material, and wherein an extracted information material is distributed via

the information network from the information distribution server to the distribution demand terminal, an addition is made to the actual number of distributions already made, a subtraction is made from the remaining number of distributions based on the results of the distribution, and the advertising list is updated so that the distribution results are reflected in the extraction probabilities for next time.

2. An information distribution system that, in response to demand from each distribution demand terminal, reads out various information from a means of storing an information material and distributes the read-out information material to the distribution demand terminals via a network, where the system comprises,

a means for managing a remaining number of distributions, where the means stores the planned number of distributions during a period of time for each information material, the actual number of distributions already made for each information material, and the remaining number of distributions for each category of each information material, which is the difference between these two numbers of distributions,

a means for generating an advertising list, where the means generates an advertising list for extraction of each category, in which the extraction probability for each information material in the case of random extraction is the ratio of the remaining number of distributions for each information material to the accumulated total of the remaining number of distributions for each information material at that point in time,

a means for category judgment, where the means judges the category to which the distribution demand terminal belongs at the time a distribution request is received from a distribution demand terminal,

a means for selecting an advertising list, where the means

selects the advertising list corresponding to the judged category,

a means for handicap application, which, when performing random extractions, applies a handicap each time to the remaining number of distributions of each information material comprised in the advertising list, so that the mean extraction probability is maintained over the time period, while causing deviation in the extraction probability distribution at each random extraction,

a means for random extraction, which performs random extraction with respect to the advertising list based on the remaining number of distributions of each information material to which a handicap has been applied, so as to extract one information material;

and wherein an extracted information material is distributed via the information network from the information distribution server to the distribution demand terminal that made the request, in addition is made to the actual number of distributions already made, a subtraction is made from the remaining number of distributions based on the results of the distribution, and the advertising list is updated so that the distribution results are reflected in the extraction probabilities for the next time.

3. The information distribution system of claim 1 or 2, in which the information material comprises an advertisement.

4. An information distribution system comprising at least a video content storage means which stores video contents, an advertisement storage means which stores advertisement materials, and a video content distribution server which selectively reads requested video contents from the video content storage means, and distributes, via a network, the video content to a viewer terminal that has made a request, and the system further comprises,

an advertisement distribution condition database, which

stores at least, for each advertisement, information about the desired number of reproductions for the advertisement during a planned time period and information about specifications of increasing or decreasing with respect to each category and time  
5 period,

a viewer database, which stores at least information about a category to which each viewer belongs, and information about the viewing history for each viewer,

a means for predicting the number of distribution demands,  
10 which predicts the number of demanded distributions within the time period for each category, based on the information on the viewing history of all viewers,

a means for calculating the number of planned distributions, which calculates the number of planned distributions of each  
15 advertisement for each category, so as to balance the number of desired advertisements of each advertisement for each category and the number of requested distributions for each category,

a means for generating a random extraction advertising list, which generates an advertising list for each category, wherein  
20 the extraction probability for each advertisement in the case of random extraction is the ratio of the planned number of distributions of each advertisement for each category to the accumulated total for each category of the planned number of distributions of all the advertisements,

25 a means for random extraction, which performs random selection and extraction with respect to the advertising list corresponding to a category to which the distribution demand terminal belongs, so as to select one advertisement,

a means for generating a distribution list, which generates  
30 a distribution list in which the extraction sequence is used as the advertisement distribution sequence, by repeating the random extraction of advertisements by the means for random extraction until the demanded advertisement slots are filled, while

updating the advertising list so that the extraction probabilities for the next time reflect the results of the extraction,

5 a means for managing a distribution list, which stores the distribution list and outputs the list to an advertisement material distribution server, and

an advertisement material distribution server which, based on the distribution list, sequentially and selectively reads a corresponding advertisement material from the advertisement material storage means, and when the video content is distributed via the information network to a distribution demand terminal which has made a request, performs a linked distribution of the advertisement material.

15 5. The information distribution system of claim 4, wherein the means of generating a distribution list generates a distribution list in which the extraction sequence is used as the advertisement distribution sequence, by repeating the random extraction of advertisements by the means for random extraction until the demanded advertisement slots are filled, while  
20 updating each number of planned distributions of the advertising list by reducing the number of planned distributions so that there is no return to the advertising list for the extracted advertisement.

25 6. The information distribution system of claim 4, wherein the means for generating a distribution list generates a distribution list in which the extraction sequence is used as the advertisement distribution sequence, by repeating the random extraction of advertisements by the means for random extraction until the demanded advertisement slots are filled, while  
30 multiplying the extraction probability of each advertisement by a corresponding correction coefficient and updating the extraction probability of each advertisement in the advertising list so that the extraction probability for the next time

reflects the extraction results.

7. The information distribution system of any one of claims 4 to 6, wherein the advertisement distribution condition database further stores a category classification for each advertisement, and the system further comprises

a means for minimum unit category classification which performs a detailed division, into minimum categories, of the categories for all the advertisements desired to be distributed during the time period, and

assigning the increase or decrease specifications stored in the advertisement distribution condition database to the corresponding minimum categories, and then storing the specifications again.

8. The information distribution system of any one of claims 4 to 7, wherein the means for calculating the number of planned distributions, in order to increase or decrease the initially allocated number of reproductions for the advertisement for the specified category for each advertisement in accordance with the target specification, performs a uniform flexible adjustment between the initially allocated number and the number of reproductions for the advertisement for categories without target specification for the advertisement; and uses each of the number of reproductions for the advertisement to which the increase or decrease adjustment has made as the planned number of distributions for each category, so that the overall number of reproductions for the advertisement comprised in each category agrees with the number of distribution demands for each category, while maintaining the ratio of the number of reproductions for each advertisement for each category to the overall number of planned reproductions for advertisements comprised in each category after the flexible adjustment.

9. The information distribution system of any one of claims 4 to 7, wherein the means for calculating the number of planned

distributions, in order to increase or decrease an initially allocated number of reproductions for the advertisement for the specified category for each advertisement in accordance with the target specification, performs uniform flexible adjustment  
 5 between the initially allocated number and the number of reproductions for the advertisement for categories without the target specification for the advertisement; and takes the number of reproductions for the advertisement of each advertisement wherein the deficiency or excess of the number of reproductions  
 10 for the advertisement for the categories without the target specification caused by the adjustment is adjusted flexibly and uniformly relative to all the advertisements comprised in the specified categories, so as to maintain the ratio of the number of reproductions for the advertisement after the adjustment to  
 15 the overall number, as the number of planned distributions for each category.

10. The information distribution system of any one of claims 4 to 7, wherein the means for calculating the number of planned distributions takes the number of reproductions for the  
 20 advertisement of each advertisement, calculated by the following means of processing (i) to (v), as the number of planned distribution for each category,

(i) a means of processing for taking an amount obtained by dividing the initially allocated number of reproductions for the  
 25 advertisement of each category by an integer as the unit adjustment amount, and extracting a number of reproductions for the advertisement corresponding to the unit adjustment amount for each category from the initially allocated number of reproductions for the advertisement for the category, so that  
 30 the ratio of the number of reproductions for the advertisement of each advertisement to the unit adjustment amount for each category is the same as that of the number of reproductions for the advertisement of each advertisement to the overall initially

allocated number,

(ii) a means of processing for adjusting the number of reproductions for the advertisement of an advertisement with a target specification by increasing or decreasing in accordance with the target specification in the unit adjustment amount, and performing uniform flexible adjustment of a deficiency or excess occurring in the number of reproductions for the advertisement due to the adjustment relative to the number of reproductions for the advertisement of each advertisement in categories without the target specification,

(iii) a means of processing for dividing the number of reproductions for the advertisement for each advertisement in each category after the flexible adjustment into a portion that fits within the unit adjustment amount and a portion that spills over it, while maintaining the ratio of the number of reproductions for the advertisement for each advertisement of each category after the flexible adjustment relative to the overall number,

(iv) a means of processing for repeating an integer number of times the processing of (ii) to (iii) with respect to the accumulation of the number of reproductions for the advertisement for each advertisement spilling over from the unit adjustment amount and the number of reproductions for the advertisement of each advertisement comprised in the next unit adjustment,

(v) a means of processing for taking the number of reproductions for the advertisement of each advertisement obtained by accumulating the portion that fits within the unit adjustment amount for each category as the number of reproductions for the advertisement in the category on each flexible adjustment.

11. The information distribution system according to any one of claims 4 to 7, wherein the means for calculating the



number of planned distributions sets the target function  $Z$ , which comprises the difference between the desired number of reproductions for the advertisement adjusted by increasing or decreasing for each category for each advertisement and the  
5 number of reproductions for the advertisement, and uses a mathematical programming method to solve for a combination of the number of reproductions for the advertisement for each category of each advertisement, so that the value of the target function  $Z$  is minimized, and then the solved number of  
10 reproductions for the advertisement for each category of each advertisement is taken as the number of planned distributions for each category.

12. The information distribution system of any one of claims 8 to 11, wherein the increase or decrease in accordance  
15 with the specification is an increase or decrease adjustment of the number of reproductions for the advertisement, so that when the ratio of the number of the advertisements before the increase or decrease adjustment relative to the overall number of reproductions for the advertisement in the category is  
20 compared with that after the increase or decrease adjustment relative to the overall, the specified ratio of increase or decrease is achieved.

13. The information distribution system of any one of claims 8 to 11, wherein the increase or decrease in accordance  
25 with the specification further performs the increase and decrease adjustment of claim 12 after an increase or decrease adjustment of the number of reproductions for the advertisement so as to achieve the ratio of increase or decrease specified after the adjustment.

30 14. An information distribution system comprising at least a video content storage means which stores video contents, an advertisement storage means which stores advertisement materials, and a video content distribution server which selectively reads

a requested video content from the video content storage means, and distributes the video content to a viewer terminal that has made the request via a network; and the system further comprises

an advertisement distribution condition database, which  
5 stores, for each advertisement, at least information about the desired number of reproductions for the advertisement during a planned time period, and information about a specification of increasing or decreasing with respect to each category,

a viewer database, which stores at least information about  
10 a category to which each viewer belongs, and information about the viewing history for each viewer,

a means for predicting the number of distribution demands, which, based on the information about the viewing histories of all viewers, predicts the number of demanded distributions  
15 within the time period for each category,

a means of generating an as yet unallocated advertising list, which generates an as yet unallocated advertising list for each advertisement comprising the number of remaining advertisements of the overall number of desired advertisements  
20 during the planned time period for each advertisement,

a means of generating an initial allocation advertising list, which multiplies the as yet unallocated advertising list for each advertisement by the ratio of the number of demanded distributions for each of the categories to the total number, so  
25 as to generate an initial allocation advertising list allocated to each category,

a means for calculating a post-increase/decrease adjusted number of desired advertisements, which determines for each category for each advertisement the initially allocated number  
30 of desired advertisements and the number of desired advertisements after the increase or decrease adjustment, based on the increase/decrease specification for each category,

a means for calculating the number of planned distributions,

which calculates the number of planned distributions of each advertisement for each category by calculating a category weight for each category for each advertisement, so as to balance between the post-increase/decrease adjusted number of desired advertisements and the number of demanded distributions for each category, and multiplying the number of demanded distributions for each category and the calculated category weight,

5 a means for generating a pre-allocated advertising list, which generates an advertising list for each category, in which  
10 the extraction probability for each advertisement in the case of a random extraction is the ratio of the number of planned distributions of each advertisement for each category to the overall accumulation of the number of planned distributions for each category,

15 a means for calculating handicap, which, with respect to the pre-allocated advertising list for each category, calculates a handicap that varies the number of planned distributions of each advertisement comprised in the pre-allocated advertising list, so as to cause deviations in the extraction probability  
20 distribution for each advertisement during each time region while maintaining the mean extraction probability of each advertisement over the period of time,

a means for generating a next time region advertising list, which uses the handicap to extract an advertising list for each  
25 category for the next time region from the pre-allocated advertising list for each category,

a means for category judgment, which, when a distribution request is received from a distribution demand terminal, judges the category to which said terminal belongs,

30 a means for selecting an advertising list, which selects the next time region advertising list corresponding to the judged category,

a means for random extraction, which performs random

extraction with respect to the selected next time region advertising list so as to extract one advertisement,

5 a means for generating a distribution list, which generates a distribution list by using the means for random extraction to repeat random extractions until the advertisement slots that have been demanded are filled, while updating the next time region advertising list so that the results of the extraction are reflected in each extraction probability for the next extraction, and which uses the extraction sequence as the  
10 advertisement distribution sequence,

a means for managing a distribution list, which stores the distribution list and outputs it to an advertisement material distribution server, and

15 an advertisement material distribution server which, based on the distribution list, sequentially and selectively reads a corresponding advertisement material from the advertisement material storage means, and which, when the video content is distributed via an information network to the distribution demand terminal which has made the request, performs linked  
20 distribution of the advertisement material.

15. The information distribution system of claim 14, wherein the means for generating a distribution list generates a distribution list in which the extraction sequence is used as the advertisement distribution sequence by repeating the random  
25 extraction of advertisements by the means for random extraction until the demanded advertisement slots are filled, while updating each number of planned distribution of the advertising list so that subtraction is made from the number of planned distributions for the extracted advertisement and there is no  
30 return to the selected next time region advertising list.

16. The information distribution system of claim 14, wherein the means for generating a distribution list generates a distribution list in which the extraction sequence is used as

the advertisement distribution sequence, by repeating the random extraction of advertisements by the means for random extraction until the demanded advertisement slots are filled, while multiplying the extraction probability of each advertisement by a corresponding correction coefficient and updating the extraction probability of each advertisement in the selected next time region advertising list so as to reflect the results of the extraction in the next extraction probability.

17. The information distribution system of claim 16, wherein the means for generating a next time region advertising list can update the number of planned distributions of each advertisement in the advertising list without changing the handicap calculated by the means for calculating handicap.

18. The information distribution system of any one of claims 14 to 17, wherein the advertisement distribution condition database further stores a category classification for each advertisement, the system further comprising

a means for minimum unit category classification, which finely divides the category classification of all of the advertisements desired to be distributed during the time period into classifiable minimum categories, and wherein

the increase or decrease specifications stored in the advertisement distribution condition database are assigned to the corresponding minimum unit categories and stored again.

19. The information distribution system of any one of claims 14 to 18, wherein

the means for calculating the number of planned distributions uniformly and flexibly adjusts the initially allocated number of reproductions for the advertisement with the target specification for the specified category using category weight, so as to increase or decrease in accordance with the target specification, relative to the number of reproductions

for the advertisement for categories without target specification for the advertisement, and while maintaining the ratio of the number of reproductions for the advertisement for each category of each advertisement after the flexible

5 adjustment to the planned number of reproductions for the advertisement for each advertisement, the category weight for the advertisement is calculated by dividing each of the number of reproductions for the advertisement which has been adjusted by increasing or decreasing so that the total number of  
10 reproductions for the advertisement in each category corresponds to the number of distribution demands for each category, by the remaining number of distribution demands for the category.

20. The information distribution system of any one of claims 14 to 18, wherein the means for calculating the number of  
15 planned distributions adjusts uniformly and flexibly the initially allocated number of each advertisement with a target specification for the specified category so as to increase or decrease in accordance with the target specification, relative to the number of the advertisements for categories without  
20 target specification for each advertisement, and when a deficiency or excess of the number of reproductions for the advertisement for the categories without target specification derived from the flexible adjustment is uniformly and flexibly adjusted relative to all of the advertisements  
25 comprised in the categories with the target specification so as to maintain the ratio of the adjusted number of reproductions for the advertisement to the overall number for the categories, the category weight for each advertisement can be calculated by dividing the number of reproductions for the advertisement of  
30 each advertisement by the remaining number of distribution demands for the category.

21. The information distribution system of any one of claims 14 to 18, wherein the means for calculating the number of

planned distributions takes the value obtained by dividing the number of reproductions for the advertisement for each advertisement calculated by the following means of processing (i) to (v), by the number of distribution demands for the category as the category weight for that category of the advertisement,

(i) a means of processing for pulling out the number of reproductions for the advertisement corresponding to a unit adjustment amount for each category from the initially allocated number of reproductions for the advertisement for each category, wherein the unit adjustment amount is defined as the initially allocated number of reproductions for the advertisement for each category that has been divided by an integer, so that the ratio of the number of reproductions for the advertisement for each advertisement to the unit adjustment amount for each category becomes the same as that of the number of reproductions for the advertisement for each advertisement to the total initially allocated number of reproductions for the advertisement for each category,

(ii) a means of processing for adjusting the number of reproductions for the advertisement of an advertisement with a target specification by increasing or decreasing in accordance with the target specification, and performing uniform flexible adjustment of a deficiency or excess occurring in the number of reproductions for the advertisement by the increase or decrease adjustment relative to the number of reproductions for the advertisement of each advertisement in categories without target specification,

(iii) a means of processing for dividing the number of reproductions for the advertisement for each advertisement in each category after the flexible adjustment into a portion fitting within the unit adjustment amount and that spilling over the unit adjustment amount, while maintaining the ratio of the

number of reproductions for the advertisement of each advertisement for each category after the flexible adjustment relative to the overall number,

5 (iv) a means of processing for repeating (ii) to (iii) an integer number of times with respect to the accumulation of the number of reproductions for the advertisement for each advertisement spilling over from the unit adjustment amount and the number of reproductions for the advertisement for each advertisement comprised in the next unit adjustment,

10 (v) a means of processing for taking the number of reproductions for the advertisement for each advertisement obtained by accumulating the portion that fits within the unit adjustment amount for each category on each flexible adjustment as the number of reproductions for the advertisement in the  
15 category.

22. The information distribution system of any one of claims 14 to 18, wherein the means for calculating the number of planned distributions sets the target function  $Z$ , which comprises the difference between the number of desired  
20 reproductions for the advertisement adjusted by increasing or decreasing and the number of actual reproductions for the advertisement for each category of each advertisement, and uses a mathematical programming method for solving the combination of the number of reproductions for the advertisement for each  
25 category of each advertisement so that the value of the target function  $Z$  is minimized, and wherein the category weight of the category for the advertisement is calculated by dividing the solved number of reproductions for the advertisement for each category for each advertisement by the number of distribution  
30 demands for the category.

23. The information distribution system of any one of claims 19 to 22, wherein increasing or decreasing in accordance with the specification means adjusting by increasing or



decreasing the number of reproductions for the advertisement so that, when the ratio of the number of reproductions for the advertisement for the advertisement before the increase or decrease adjustment relative to the overall number of reproductions for the advertisement in the category is compared with that of the number of reproductions for the advertisement for the advertisement after the increase or decrease adjustment relative to the overall, the specified ratio of increase or decrease is achieved.

24. The information distribution system of any one of claims 19 to 22, wherein the increase or decrease adjustment in accordance with the adjustment specification means performing the increase or decrease adjustment of claim 23 after adjusting the number of reproductions for the advertisement by increasing or decreasing it so as to achieve the specified ratio of increase or decrease.

25. The information distribution system of any one of claims 14 to 24, wherein the means for calculating handicap comprises a means for calculating a disallowed date coefficient, a means for calculating a target date coefficient, a means for calculating a disallowed time band coefficient, and a means for calculating a target time band coefficient, the product of the coefficients calculated by these calculation means being taken as the handicap coefficient, and the value of the product is the ratio of the number of planned distributions for the next time region, which is determined so as to maintain the average advertising probability during the time period, relative to the number of remaining distributions at the end of the current time region.

26. The information distribution system of claim 25, wherein

the number of reproductions for the advertisement for an advertisement for which a disallowance is specified during a

specified time region is uniformly distributed over a time region for which there is no disallowance specification, an increase or decrease adjustment is done with respect to the number of reproductions for the advertisement for advertisements without disallowance specification so as to coincide with each of the total number of planned advertisements in the specified disallowed time region and a time region without the disallowance specification, and then the disallowance coefficient is obtained by dividing the resulting number of reproductions for the advertisement for each advertisement by the number of remaining distributions of the advertisement in the time region, and

the number of reproductions for the advertisement for an advertisement for which there is a target specification in the time region of the target specification is uniformly procured from the number of reproductions for the advertisement for the advertisement for which there is a target specification without the target specified time region so as to increase in accordance with the target specification, while maintaining the ratio of the number of reproductions for the advertisement for each advertisement to the overall number in each time region after procurement, the overall number of reproductions for the advertisement in the time region is adjusted by increasing or decreasing so as to coincide with the planned number of reproductions for the advertisement in that time region, and then the target coefficient is calculated by dividing the resulting number of reproductions for the advertisement for each advertisement in each time region by the remaining number of distributions of the advertisement in the planned time period.

27. The information distribution system of claim 25, wherein

the number of reproductions for the advertisement of an advertisement for which a disallowance is specified during a

disallowance specification time region is uniformly allocated over a time region for which there is no disallowance specification, uniform extraction is performed from the number of reproductions for the advertisement of an advertisement for which there is no disallowance specification, while maintaining the ratio of the number of reproductions for the advertisement of an advertisement not with a disallowance specification in a time region without the disallowance specification time region so as to be the same as the allocated amount, the extracted number of reproductions for the advertisement is used to compensate the deficiency in the disallowance specification time region, and the disallowance coefficient is obtained by dividing the resulting number of reproductions for the advertisement of each advertisement by the remaining number of distributions of each advertisement in that time region, and

in order to increase the number of reproductions for the advertisement of an advertisement for which there is a target specification in the time region of the target specification, uniform procurement is performed from the number of reproductions for the advertisement of the advertisement for which there is a target specification without the target specification time region, while maintaining the ratio of the number of reproductions for the advertisement of each advertisement in the time region of the target specification to the overall number of reproductions for the advertisement after the procurement, the deficiency in the number of reproductions for the advertisement in a time region without the target specification caused by the procurement is compensated by the number of all advertisements comprised in the target specification time region to which the number of reproductions for the advertisement corresponding to the procured amount has been target specified, and the target coefficient is obtained by dividing the resulting number of reproductions for the

advertisement of each advertisement by the remaining number of distributions of the advertisement during the planned time period.

28. The information distribution system of claim 25, which uses as the coefficients the values obtained by dividing the number of reproductions for the advertisement of each advertisement, calculated by the following means of processing (i) to (v), by the number of remaining distributions of the advertisement in the planned time period,

(i) a means of processing for taking an amount obtained by dividing the remaining number of reproductions for the advertisement in the distribution slot of each time region by an integer as the unit adjustment amount, and extracting a number of reproductions for the advertisement corresponding to the unit adjustment amount for each time region from the remaining number of reproductions for the advertisement for that time region so that the ratio of the number of reproductions for the advertisement for each advertisement to the unit adjustment amount is the same as that of the number of reproductions for the advertisement of each advertisement to the overall remaining number of reproductions for the advertisement in each time region,

(ii) a means of processing for performing flexible adjustment that increases or decreases the number of reproductions for the advertisement of an advertisement having an adjustment specification within the unit adjustment amount in accordance with the adjustment specification, and for uniformly allocating the number of reproductions for the advertisement adjusted by decreasing among time regions other than the adjustment specification, or uniformly procuring the number of reproductions for the advertisement adjusted by increasing from the number of reproductions for the advertisement of advertisements having an adjustment specification in the time

region other than the adjustment specification time region,

(iii) a means of processing for dividing the number of reproductions for the advertisement for each advertisement for each time region after the flexible adjustment into a portion that fits within the unit adjustment amount, and a portion that spills over it, while maintaining the ratio of the number of reproductions for the advertisement of each advertisement in the time region after the flexible adjustment relative to the overall number,

(iv) a means of processing for repeating (ii) to (iii) an integer number of times with respect to the accumulation of the number of reproductions for the advertisement for each advertisement spilling over from the unit adjustment amount, and that for each advertisement comprised in the next unit adjustment,

(v) a means of processing for taking the number of reproductions for the advertisement of each advertisement obtained by accumulating for each time region the portion fitting within the unit adjustment amount as the number of reproductions for the advertisement in that time region.

29. The information distribution system of claim 25, wherein the various coefficients are taken as the values obtained by setting a target function  $Z$ , which comprises the difference between the number of reproductions for the advertisement and the desired number of reproductions for the advertisement adjusted by increasing or decreasing in accordance with the adjustment specification for each category of each advertisement, using a mathematical programming method for solving for a combination of the number of reproductions for the advertisement for each category of each advertisement so that the function  $Z$  is minimized, and dividing the resulting number of reproductions for the advertisement for each category of each advertisement by the number of remaining distributions of the

advertisement within the planned time period.

30. The information distribution system of any one of claims 26 to 29, wherein the increase or decrease adjustment in accordance with the adjustment specification is an increase or decrease adjustment of the number of reproductions for the advertisement, so that when the ratio of the number of reproductions for the advertisement of the advertisement before the adjustment relative to the overall number in the time region is compared with that after the adjustment relative to the overall number, the specified ratio of increase or decrease is achieved.

31. The information distribution system of any one of claims 26 to 29, wherein the increase or decrease adjustment in accordance with the adjustment specification is the increase or decrease adjustment of claim 30 after performing an increase or decrease adjustment of the number of reproductions for the advertisement so as to achieve the specified ratio of increase or decrease.

32. The information distribution system of any one of claims 14 to 31, wherein each time when the means for generating a distribution list performs a random extraction, if an advertisement which has been extracted at a previous time or reaches the upper limit of the number of distributions, the result of the extraction that time is made invalid, and a random extraction is performed again.

33. The information distribution system of any one of claims 14 to 32, wherein

the advertisement slot condition database further stores the slot size in seconds for each advertisement material and the slot pattern of each video content, and furthermore stores a coefficient of slot size in seconds for each advertisement, which has been multiplied so that an extraction probability that is not dependent on the size of the slot size in seconds can be

obtained from a decision tree of the combination patterns of slot patterns and the number of seconds of each advertisement material, and the means for generating a distribution list has an additional extraction probability adjustment function for the slot size in seconds, which when performing a random extraction, selectively reads from the advertisement slot condition database the slot size in seconds in accordance with the combination of slot pattern and advertisement material so that the extraction probability for each advertisement material is the product of the original extraction probability and the coefficient of slot size in seconds.

34. The information distribution system of any one of claims 14 to 32, wherein the advertisement slot condition database further stores the slot size in seconds for each advertisement and the slot pattern for each video content, which system comprises a means for calculating an expected value, where that means, from a decision tree of the combination of patterns of the slot pattern and the number of seconds for each advertisement material, calculates an expected extraction value for each advertisement material at each first extraction of each advertisement slot, and a weight calculation means, which, based on the respective expected values, calculates weights proportional to the number of planned distributions for each advertisement material, and wherein upon the first extraction of an advertisement slot, the original extraction probabilities for each advertisement material is multiplied by the weights to add an extraction probability adjustment function for the slot size in seconds.

35. The information distribution system of any one of claims 14 to 32, wherein the advertisement slot condition database further stores the slot size in seconds for each advertisement material and the slot pattern for each video content, which system comprises an means for calculating an

expected value, which calculates the expected value of the number of advertisement seconds with regard to all advertisement material within the advertising list, and a means for calculating the frequency of extractions, which calculates the number of  
5 extraction times for the expected value of slot size in seconds based on the slot size in seconds and the expected value of the number of advertisement seconds for each advertisement, and wherein with respect to each advertisement slot, random extraction is performed at frequencies calculated by the means  
10 for calculating the frequency of extractions.

36. The information distribution system of any one of claims 14 to 32, wherein the advertisement slot condition database further stores the slot size in seconds for each advertisement material and the slot patterns for each video  
15 content,

which system comprises a means for calculating an expected value, where that means calculates the expected value of the number of advertisement seconds with regard to all advertisement material within the advertising list, a means for calculating  
20 the frequency of extractions, which, based on the value of slot size in seconds and the expected value of slot size in seconds for each advertisement, calculates the frequency of extractions so that the value of slot size in seconds for each advertisement coincides with the expected value of slot size in seconds, a  
25 means for generating a decision tree, which generates a decision tree of the frequency of extractions and arranges branches that do not satisfy an allowed slot limit based on the combination pattern of the slot pattern and the number of advertisement material seconds, and a means for calculating the coefficient of  
30 slot size in seconds, which calculates the coefficient of slot size in seconds based on the arranged decision tree,

and wherein an extraction probability adjustment function for the slot size in seconds is added, in which the extraction



probability of each advertisement material is the product of the original extraction probability and the coefficient of slot size in seconds.

37. The information distribution system of any one of  
5 claims 1 to 36, wherein

the advertisement slot conditions database further stores information about a specified medium class for each advertisement, the specification of video content class, and the advertisement slot class,

10 the means for category judgment also judges considering the information media class of the viewer terminal which made a viewing request, the video content class of the viewing request, and the advertisement slot class, and an advertising list for the classes has been provided beforehand when performing a  
15 category judgment, and

the advertising list selection means selects a class-dedicated advertising list for that class when a judgment is made that the above category is that class.

38. An information distribution method that distributes  
20 each information material from an information distribution server to an information demand terminal via an information network, where the method comprises the steps of:

managing the number of distributions, wherein the planned number of distributions during a period of time for each  
25 information material, the actual number of distributions already made for each information material, and the remaining number of distributions for each information material, which is the difference between these two numbers of distributions, are stored,

30 generating an advertising list for extraction, in which the extraction probability for each information material in the case of random extraction is the ratio of the remaining number of distributions for each information material to the accumulated

total of the remaining number of distributions for each information material at that point in time,

applying handicap application, wherein, when performing random extractions, a handicap is applied each time to the remaining number of distributions of each information material comprised by the advertising list, so that the mean extraction probability is maintained over the time period, while causing deviation in the extraction probability distribution at each random extraction,

extracting one information material by performing a random extraction with respect to the advertising list, based on the remaining number of distributions of each information material to which a handicap has been applied, and

distributing the extracted information material via the information network to the distribution demand terminal, and updating the advertising list so that the distribution results are reflected in the extraction probabilities for next time.

39. An information distribution method that, in response to demand from each distribution demand terminal, reads out various information and distributes the read-out information material to the distribution demand terminals via a network, where the method comprises the steps of:

storing the planned number of distributions during a period of time for each information material, the actual number of distributions already made for each information material, and the remaining number of distributions for each category of each information material, which is the difference between these two numbers of distributions,

generating an advertising list of each category, in which the extraction probability for each information material in the case of random extraction is the ratio of the remaining number of distributions for each information material to the accumulated total of the remaining number of distributions for

each information material at that point in time,

judging category to which the distribution demand terminal belongs at the time a distribution request is received from a distribution demand terminal,

5 selecting an advertising list corresponding to the judged category,

applying handicap, wherein a handicap is applied each time of random extractions to the remaining number of distributions of each information material comprised in the advertising list, 10 so that the mean extraction probability is maintained over the time period, while causing deviation in the extraction probability distribution at each random extraction,

extracting one information material by performing random extraction with respect to the advertising list based on the 15 remaining number of distributions of each information material to which a handicap has been applied; and

distributing the extracted information material via the information network to the distribution demand terminal that made the request, performing an addition to the actual number of 20 distributions already made and a subtraction from the remaining number of distributions based on the results of the distribution, and then updating the advertising list so that the distribution results are reflected in the extraction probabilities for the next time.

25 40. The information distribution method of claim 38 or 39, in which the information material comprises an advertisement.

41. An information distribution method comprising at least storing a video content, storing an advertisement material, and selectively reading a requested video content and distributing 30 via a network the video content to a viewer terminal that has made a request, and the method further comprises the steps of:

storing at least, for each advertisement, information about the desired number of reproductions for the advertisement during

a planned time period and information about specifications of increasing or decreasing with respect to each category and time period,

5 storing at least information about a category to which each viewer belongs, and information about the viewing history for each viewer,

predicting the number of distribution demands within the time period for each category, based on the information on the viewing history of all viewers,

10 calculating the number of planned distributions of each advertisement for each category, so as to balance the number of desired advertisements of each advertisement for each category and the number of distribution demands for each category,

15 generating a random extraction advertising list for each category, in which the extraction probability for each advertisement in the case of random extraction is the ratio of the planned number of distributions of each advertisement for each category to the accumulated total for each category of the planned number of distributions of all the advertisements,

20 extracting one advertisement by selecting and performing random extraction with respect to the advertising list corresponding to a category to which the distribution demand terminal belongs,

25 generating a distribution list in which the extraction sequence is used as the advertisement distribution sequence, by repeating the random extraction of advertisements until the demanded advertisement slots are filled, while updating the advertising list so that the extraction probabilities for the next time reflect the results of the extraction,

30 storing the distribution list and outputting the list to an advertisement material distribution server, and

sequentially and selectively reading a corresponding advertisement material based on the distribution list, and when

the video content is distributed via the information network to a distribution demand terminal which has made a request, performing a linked distribution of the advertisement material.

42. The information distribution method of claim 41,  
5 wherein the step of generating a distribution list generates a distribution list in which the extraction sequence is used as the advertisement distribution sequence, by repeating the random extraction of advertisements by the step of extracting one advertisement until the demanded advertisement slots are filled,  
10 while updating each number of planned distributions of the extracted advertisement by reducing it so that there is no return to the advertising list for random extraction.

43. The information distribution method of claim 41,  
wherein the step of generating a distribution list generates a  
15 distribution list in which the extraction sequence is used as the advertisement distribution sequence, by repeating the random extraction of advertisements by the step of extracting one advertisement until the demanded advertisement slots are filled, while multiplying the extraction probability of each  
20 advertisement by a corresponding correction coefficient and updating the extraction probability of each advertisement in the advertising list so that the extraction probability for the next time reflects the extraction results.

44. The information distribution method of any one of  
25 claims 41 to 43, wherein the method comprises the steps of:

storing a category classification for each advertisement,  
finely dividing the categories for all the advertisements  
desired to be distributed during the time period, into minimum  
categories, and

30 assigning the stored increase or decrease specifications to the corresponding minimum unit categories, and then storing the specifications again.

45. The information distribution method of any one of

claims 41 to 44, wherein the step of calculating the number of planned distributions, in order to increase or decrease the initially allocated number of reproductions for the advertisement for the specified category for each advertisement in accordance with the target specification, performs a uniform flexible adjustment between the initially allocated number and the number of reproductions for the advertisement for categories without target specification for the advertisement; and uses each of the number of reproductions for the advertisement to which the increase or decrease adjustment has made as the planned number of distributions for each category, so that the overall number of reproductions for the advertisement comprised in each category agrees with the number of distribution demands for each category, while maintaining the ratio of the number of reproductions for each advertisement for each category to the overall number of planned reproductions for advertisements comprised in each category after the flexible adjustment.

46. The information distribution method of any one of claims 41 to 43, wherein the step of calculating the number of planned distributions, in order to increase or decrease an initially allocated number of reproductions for the advertisement for the specified category for each advertisement in accordance with the target specification, performs uniform flexible adjustment between the initially allocated number and the number of reproductions for the advertisement for categories without the target specification for the advertisement; and takes the number of reproductions for the advertisement of each advertisement wherein the deficiency or excess of the number of reproductions for the advertisement for the categories without the target specification caused by the adjustment is adjusted flexibly and uniformly relative to all the advertisements comprised in the specified categories, so as to maintain the ratio of the number of reproductions for the advertisement after

the adjustment to the overall number, as the number of planned distributions for each category.

47. The information distribution method of any one of claims 41 to 43, wherein the step of calculating the number of planned distributions takes the number of reproductions for the advertisement of each advertisement, which is calculated by the following steps of (i) to (v) and then divided by the number of distribution demands for the category, as the category weight for the category of the advertisement:

(i) taking an amount obtained by dividing the initially allocated number of reproductions for the advertisement of each category by an integer as the unit adjustment amount, and extracting the number of reproductions for the advertisement corresponding to the unit adjustment amount for each category from the initially allocated number of reproductions for the advertisement for the category, so that the ratio of the number of reproductions for the advertisement of each advertisement to the unit adjustment amount for each category is the same as that of the number of reproductions for the advertisement of each advertisement to the overall initially allocated number,

(ii) adjusting the number of reproductions for the advertisement of an advertisement with a target specification by increasing or decreasing in accordance with the target specification in the unit adjustment amount, and performing uniform flexible adjustment of a deficiency or excess occurring in the number of reproductions for the advertisement due to the adjustment relative to the number of reproductions for the advertisement of each advertisement in categories without the target specification,

(iii) dividing the number of reproductions for the advertisement for each advertisement in each category after the flexible adjustment into a portion that fits within the unit adjustment amount and a portion that spills over it, while

maintaining the ratio of the number of reproductions for the advertisement for each advertisement of each category after the flexible adjustment relative to the overall number,

(iv) repeating an integer number of times the steps of (ii) to (iii) with respect to the accumulation of the number of reproductions for the advertisement for each advertisement spilling over from the unit adjustment amount and the number of reproductions for the advertisement of each advertisement comprised in the next unit adjustment,

(v) taking the number of reproductions for the advertisement of each advertisement obtained by accumulating the portion that fits within the unit adjustment amount for each category as the number of reproductions for the advertisement in the category on each flexible adjustment.

48. The information distribution method according to any one of claims 41 to 43, wherein the step of calculating the number of planned distributions sets the target function  $Z$ , which comprises the difference between the desired number of reproductions for the advertisement adjusted by increasing or decreasing for each category for each advertisement and the number of reproductions for the advertisement, and uses a mathematical programming method to solve for a combination of the number of reproductions for the advertisement for each category of each advertisement, so that the value of the target function  $Z$  is minimized, and wherein the solved number of reproductions for the advertisement for each category of each advertisement is taken as the number of planned distributions for each category.

49. The information distribution method of any one of claims 45 to 48, wherein the increase or decrease in accordance with the specification is an increase or decrease adjustment of the number of reproductions for the advertisement, so that when the ratio of the number of the advertisements before the



increase or decrease adjustment relative to the overall number of reproductions for the advertisement in the category is compared with that after the increase or decrease adjustment relative to the overall, the specified ratio of increase or  
 5 decrease is achieved.

50. The information distribution method of any one of claims 45 to 48, wherein the increase or decrease in accordance with the specification is the increase and decrease adjustment of claim 49 after performing an increase or decrease adjustment  
 10 of the number of reproductions for the advertisement so as to achieve the ratio of increase or decrease specified after the adjustment.

51. An information distribution method comprising at least storing a video content, storing an advertisement material, and  
 15 selectively reading a requested video content and distributing the video content to a viewer terminal that has made the request via a network; and the method further comprises the steps of:

storing for each advertisement, at least information about the desired number of reproductions for the advertisement during  
 20 a planned time period, and information about a specification of increasing or decreasing with respect to each category,

storing at least information about a category to which each viewer belongs, and information about the viewing history for each viewer,

25 predicting the number of distribution demands within the time period for each category, based on the information about the viewing histories of all viewers,

generating an as-yet-unallocated advertising list comprising the remaining number of reproductions for the  
 30 advertisement of the overall number of desired advertisements during the planned time period for each advertisement,

generating an initial allocation advertising list by multiplying the as-yet-unallocated advertising list for each

advertisement by the ratio of the number of demanded distributions for each of the categories to the total number,

determining the initially allocated number of desired advertisements and the number of desired advertisements after the increase or decrease adjustment, based on the increase/decrease specification for each category,

calculating the number of planned distributions of each advertisement for each category by calculating a category weight for each category for each advertisement so as to balance

between the post-increase/decrease adjusted number of desired advertisements and the number of distribution demands for each category, and multiplying the number of distribution demands for each category and the calculated category weight,

generating an advertising list for each category, in which the extraction probability for each advertisement in the case of a random extraction is the ratio of the number of planned distributions of each advertisement for each category to the overall accumulation of the number of planned distributions for each category,

calculating handicap, which, with respect to the pre-allocated advertising list for each category, varies the number of planned distributions of each advertisement comprised in the pre-allocated advertising list, so as to cause deviations in the extraction probability distribution for each advertisement during each time region while maintaining the mean extraction probability of each advertisement over the period of time,

extracting with the handicap an advertising list for each category for the next time region from the pre-allocated advertising list for each category, ,

judging the category to which a distribution demand terminal belongs when a distribution request is received from the terminal,

selecting an advertising list for the next time region

corresponding to the judged category,

extracting one advertisement by performing random extraction with respect to the selected next time region advertising list,

5 generating a distribution list by repeating random extractions of advertisements until the advertisement slots that have been demanded are filled, while updating the selected advertising list for the next time region so that the results of the extraction are reflected in each extraction probability for  
10 the next extraction, wherein the extraction sequence is used as the advertisement distribution sequence in the distribution list, storing and outputting the distribution list, and sequentially and selectively reading a corresponding advertisement material based on the distribution list, and when  
15 the video content is distributed via an information network to the distribution demand terminal which has made the request, performing a linked distribution of the advertisement material.

52. The information distribution method of claim 51, wherein the step of generating a distribution list generates a  
20 distribution list in which the extraction sequence is used as the advertisement distribution sequence, by repeating the random extraction of advertisements by performing the random extraction until the demanded advertisement slots are filled, while updating each number of planned distribution of the advertising  
25 list so that subtraction is made from the number of planned distributions for the extracted advertisement and there is no return to the selected next time region advertising list.

53. The information distribution method of claim 51, wherein the means for generating a distribution list generates a  
30 distribution list in which the extraction sequence is used as the advertisement distribution sequence, by repeating the random extraction of advertisements by performing the random extraction until the demanded advertisement slots are filled, while

multiplying the extraction probability of each advertisement by a corresponding correction coefficient and updating the extraction probability of each advertisement in the selected next time region advertising list so as to reflect the results of the extraction in the next extraction probability.

54. The information distribution method of claim 53, wherein the step of generating a next time region advertising list can update the number of planned distributions of each advertisement in the advertising list without changing the handicap calculated by the step of calculating handicap.

55. The information distribution method of any one of claims 51 to 55, comprising the steps of:

storing a category classification for each advertisement, finely dividing the category classification of all of the advertisements desired to be distributed during the time period into classifiable minimum categories, and

assigning the stored increase or decrease specifications to the corresponding minimum unit categories and storing the specifications again.

56. The information distribution method of any one of claims 51 to 55, wherein

the step of calculating the number of planned distributions uniformly and flexibly adjusts the initially allocated number of reproductions for the advertisement with the target specification for the specified category using category weight, so as to increase or decrease in accordance with the target specification, relative to the number of reproductions for the advertisement for categories without target specification for the advertisement, and while maintaining the ratio of the number of reproductions for the advertisement for each category of each advertisement after the flexible adjustment to the planned number of reproductions for the advertisement for each advertisement, calculates the category weight for the

advertisement by dividing each of the number of reproductions for the advertisement which has been adjusted by increasing or decreasing so that the total number of reproductions for the advertisement in each category corresponds to the number of distribution demands for each category, by the remaining number of distribution demands for the category.

57. The information distribution method of any one of claims 51 to 55, wherein the step of calculating the number of planned distributions adjusts uniformly and flexibly the initially allocated number of each advertisement with a target specification for the specified category so as to increase or decrease in accordance with the target specification, relative to the number of the advertisements for categories without target specification for each advertisement, and when a deficiency or excess of the number of reproductions for the advertisement for the categories without target specification derived from the flexible adjustment is uniformly and flexibly adjusted relative to all of the advertisements comprised in the categories with the target specification so as to maintain the ratio of the adjusted number of reproductions for the advertisement to the overall number for the categories, calculates the category weight for each advertisement by dividing the number of reproductions for the advertisement of each advertisement by the remaining number of distribution demands for the category.

58. The information distribution method of any one of claims 51 to 55, wherein the step of calculating the number of planned distributions takes the value obtained by dividing the number of reproductions for the advertisement for each advertisement calculated by the steps (i) to (v), by the number of distribution demands for the category, as the category weight for that category of the advertisement:

(i) pulling out the number of reproductions for the

advertisement corresponding to a unit adjustment amount for each category from the initially allocated number of reproductions for the advertisement for each category, wherein the unit adjustment amount is defined as the initially allocated number of reproductions for the advertisement for each category that has been divided by an integer, so that the ratio of the number of reproductions for the advertisement for each advertisement to the unit adjustment amount for each category becomes the same as that of the number of reproductions for the advertisement for each advertisement to the total initially allocated number of reproductions for the advertisement for each category,

(ii) adjusting the number of reproductions for the advertisement of an advertisement with a target specification by increasing or decreasing in accordance with the target specification, and performing uniform flexible adjustment of a deficiency or excess occurring in the number of reproductions for the advertisement by the increase or decrease adjustment relative to the number of reproductions for the advertisement of each advertisement in categories without target specification,

(iii) dividing the number of reproductions for the advertisement for each advertisement in each category after the flexible adjustment into a portion fitting within the unit adjustment amount and that spilling over the unit adjustment amount, while maintaining the ratio of the number of reproductions for the advertisement of each advertisement for each category after the flexible adjustment relative to the overall number,

(iv) repeating the steps (ii) to (iii) an integer number of times with respect to the accumulation of the number of reproductions for the advertisement for each advertisement spilling over from the unit adjustment amount and the number of reproductions for the advertisement for each advertisement comprised in the next unit adjustment,

(v) taking the number of reproductions for the advertisement for each advertisement obtained by accumulating the portion that fits within the unit adjustment amount for each category on each flexible adjustment as the number of reproductions for the advertisement in the category.

59. The information distribution method of any one of claims 51 to 55, wherein the step of calculating the number of planned distributions sets the target function  $Z$ , which comprises the difference between the number of desired reproductions for the advertisement adjusted by increasing or decreasing and the number of actual reproductions for the advertisement for each category of each advertisement, uses a mathematical programming method for solving the combination of the number of reproductions for the advertisement for each category of each advertisement so that the value of the target function  $Z$  is minimized, and wherein the category weight of the category for the advertisement is calculated by dividing the solved number of reproductions for the advertisement for each category for each advertisement by the number of distribution demands for the category.

60. The information distribution method of any one of claims 56 to 59, wherein increasing or decreasing in accordance with the specification means adjusting by increasing or decreasing the number of reproductions for the advertisement so that, when the ratio of the number of reproductions for the advertisement for the advertisement before the increase or decrease adjustment relative to the overall number of reproductions for the advertisement in the category is compared with that of the number of reproductions for the advertisement for the advertisement after the increase or decrease adjustment relative to the overall, the specified ratio of increase or decrease is achieved.

61. The information distribution method of any one of

claims 56 to 59, wherein the increase or decrease adjustment in accordance with the adjustment specification means performing the increase or decrease adjustment of claim 60 after adjusting the number of reproductions for the advertisement by increasing  
5 or decreasing it so as to achieve the specified ratio of increase or decrease.

62. The information distribution method of any one of claims 51 to 61, wherein the step of calculating handicap comprises calculating a disallowed date coefficient, calculating  
10 a target date coefficient, calculating a disallowed time band coefficient, and calculating a target time band coefficient, and takes the product of the coefficients calculated by these calculations as the handicap coefficient, and wherein the value of the product is the ratio of the number of planned  
15 distributions for the next time region, which is determined so as to maintain the average advertising probability during the time period, relative to the number of remaining distributions at the end of the current time region.

63. The information distribution method of claim 62,  
20 wherein

the number of reproductions for the advertisement for an advertisement for which a disallowance is specified during a specified time region is uniformly distributed over a time region for which there is no disallowance specification, an  
25 increase or decrease adjustment is performed with respect to the number of reproductions for the advertisement for advertisements without disallowance specification so as to coincide with each of the total number of planned advertisements in the specified disallowed time region and a time region without the  
30 disallowance specification, and then the disallowance coefficient is obtained by dividing the resulting number of reproductions for the advertisement for each advertisement by the number of remaining distributions of the advertisement in



the time region, and

the number of reproductions for the advertisement for an advertisement for which there is a target specification in the time region of the target specification is uniformly procured from the number of reproductions for the advertisement for the advertisement for which there is a target specification without the target specified time region so as to increase in accordance with the target specification, while maintaining the ratio of the number of reproductions for the advertisement for each advertisement to the overall number in each time region after the procurement, the overall number of reproductions for the advertisement in the time region is adjusted by increasing or decreasing so as to coincide with the planned number of reproductions for the advertisement in that time region, and then the target coefficient is calculated by dividing the resulting number of reproductions for the advertisement for each advertisement in each time region by the remaining number of distributions of the advertisement in the planned time period.

64. The information distribution method of claim 62,  
wherein

the number of reproductions for the advertisement of an advertisement for which a disallowance is specified during a disallowance specification time region is uniformly allocated over a time region for which there is no disallowance specification, uniform extraction is performed from the number of reproductions for the advertisement of an advertisement for which there is no disallowance specification, while maintaining the ratio of the number of reproductions for the advertisement of an advertisement not with a disallowance specification in a time region without the disallowance specification time region so as to be the same as the allocated amount, the extracted number of reproductions for the advertisement is used to compensate the deficiency in the disallowance specification time

region, and the disallowance coefficient is obtained by dividing the resulting number of reproductions for the advertisement of each advertisement by the remaining number of distributions of each advertisement in that time region, and

5        in order to increase the number of reproductions for the advertisement of an advertisement for which there is a target specification in the time region of the target specification, uniform procurement is performed from the number of reproductions for the advertisement of the advertisement for  
10        which there is a target specification without the target specification time region, while maintaining the ratio of the number of reproductions for the advertisement of each advertisement in the time region of the target specification to the overall number of reproductions for the advertisement after  
15        the procurement, the deficiency in the number of reproductions for the advertisement in a time region without the target specification caused by the procurement is compensated by the number of all advertisements comprised in the target  
20        specification time region to which the number of reproductions for the advertisement corresponding to the procured amount has been target specified, and the target coefficient is obtained by dividing the resulting number of reproductions for the  
25        advertisement of each advertisement by the remaining number of distributions of the advertisement during the planned time period.

65. The information distribution method of claim 62, wherein the coefficients are taken as the values obtained by dividing the number of reproductions for the advertisement of each advertisement calculated by the following steps (i) to (v),  
30        by the number of remaining distributions of the advertisement in the planned time period:

(i) taking an amount obtained by dividing the remaining number of reproductions for the advertisement in the

distribution slot of each time region by an integer as the unit adjustment amount, and extracting the number of reproductions for the advertisement corresponding to the unit adjustment amount for each time region from the remaining number of reproductions for the advertisement for that time region so that the ratio of the number of reproductions for the advertisement for each advertisement to the unit adjustment amount is the same as that of the number of reproductions for the advertisement of each advertisement to the overall remaining number of reproductions for the advertisement in each time region,

(ii) performing flexible adjustment that increases or decreases the number of reproductions for the advertisement of an advertisement with an adjustment specification within the unit adjustment amount in accordance with the adjustment specification, and uniformly allocating the number of reproductions for the advertisement adjusted by decreasing among time regions other than the adjustment specification, or uniformly procuring the number of reproductions for the advertisement adjusted by increasing from the number of reproductions for the advertisement of advertisements having an adjustment specification in the time region other than the adjustment specification time region,

(iii) dividing the number of reproductions for the advertisement for each advertisement for each time region after the flexible adjustment into a portion that fits within the unit adjustment amount, and a portion that spills over it, while maintaining the ratio of the number of reproductions for the advertisement of each advertisement in the time region after the flexible adjustment relative to the overall number,

(iv) repeating the steps (ii) to (iii) an integer number of times with respect to the accumulation of the number of reproductions for the advertisement for each advertisement spilling over from the unit adjustment amount, and that for each

advertisement comprised in the next unit adjustment,

(v) taking the number of reproductions for the advertisement of each advertisement obtained by accumulating for each time region the portion fitting within the unit adjustment amount as the number of reproductions for the advertisement in that time region.

66. The information distribution method of claim 62, wherein the various coefficients are taken as the values obtained by setting a target function  $Z$ , which comprises the difference between the number of reproductions for the advertisement and the desired number of reproductions for the advertisement adjusted by increasing or decreasing in accordance with the adjustment specification for each category of each advertisement, using a mathematical programming method for solving for a combination of the number of reproductions for the advertisement for each category of each advertisement so that the function  $Z$  is minimized, and dividing the resulting number of reproductions for the advertisement for each category of each advertisement by the number of remaining distributions of the advertisement within the planned time period.

67. The information distribution method of any one of claims 63 to 66, wherein the increase or decrease adjustment in accordance with the adjustment specification is an increase or decrease adjustment of the number of reproductions for the advertisement, so that when the ratio of the number of reproductions for the advertisement of the advertisement before the adjustment relative to the overall number in the time region is compared with that after the adjustment relative to the overall number, the specified ratio of increase or decrease is achieved.

68. The information distribution method of any one of claims 63 to 66, wherein the increase or decrease adjustment in accordance with the adjustment specification is the increase or

decrease adjustment of claim 67 after performing an increase or decrease adjustment of the number of reproductions for the advertisement so as to achieve the specified ratio of increase or decrease.

5        69. The information distribution method of any one of claims 51 to 68, wherein each time of extractions, if an advertisement which has been extracted at a previous time or reaches the upper limit of the number of distributions is extracted, the step of generating a distribution list makes the  
10      result of the extraction that time invalid, and performs a random extraction again.

      70. The information distribution method of any one of claims 51 to 69, wherein the method comprises the steps of  
15      further storing the slot size in seconds for each advertisement material and the slot pattern of each video content, and of furthermore storing the coefficient of slot size in seconds for each advertisement, which has been multiplied so that an extraction probability that is not dependent on the size of the slot size in seconds can be obtained from a decision tree of the  
20      combination patterns of slot patterns and the number of seconds of each advertisement material; and wherein

      the step of generating a distribution list further comprises selectively reading the coefficient of slot size in seconds in accordance with the combination of the corresponding  
25      slot pattern and the slot size in seconds for each advertisement material at random extractions, so that the extraction probability is adjusted to be the advertisement probability which is the product of the original extraction probability and the coefficient of slot size in seconds.

30      71. The information distribution method of any one of claims 51 to 69, wherein the advertisement slot condition database further stores the slot size in seconds for each advertisement and the slot pattern for each video content, and

the method comprises the steps of:

calculating an expected extraction value for each advertisement material at each first extraction of each advertisement slot, using a decision tree of the combination patterns of the slot pattern and the number of seconds for each advertisement material,

calculating a weight proportional to the number of planned distributions for each advertisement material, based on the respective expected values, and

upon the first extraction of each advertisement slot, multiplying the original extraction probability for each advertisement material by the weight and adjusting an extraction probability for the slot size in seconds.

72. The information distribution method of any one of claims 51 to 69, wherein the advertisement slot condition database further stores the slot size in seconds for each advertisement material and the slot pattern for each video content, and wherein the method comprises the steps of:

calculating an expected value of the number of

advertisement seconds with regard to all advertisement material within the advertising list

calculating the frequency of extractions, wherein the slot size in seconds is taken as the expected value, based on the slot size in seconds and the expected value of the number of advertisement seconds for each advertisement,

performing a random extraction at the calculated frequency of extractions, with respect to each advertisement slot.

73. The information distribution method of any one of claims 51 to 69, wherein the advertisement slot condition database further stores the slot size in seconds for each advertisement material and the slot patterns for each video content, and wherein the method comprises the steps of:

calculating an expected value of the number of

advertisement seconds with regard to all advertisement material within the advertising list,

calculating the frequency of extractions, wherein the value of slot size in seconds is taken as the expected value, based on the value of slot size in seconds and the expected value of slot size in seconds for each advertisement,

generating a decision tree of the frequency of extractions and arranging branches that do not satisfy an allowed slot limit, based on the combination pattern of the slot pattern and the number of advertisement material seconds,

calculating the coefficient of slot size in seconds, which calculates the coefficient of slot size in seconds based on the arranged decision tree, and furthermore

adjusting an extraction probability for the slot size in seconds, wherein the extraction probability of each advertisement material is the product of the original extraction probability and the coefficient of slot size in seconds.

74. The information distribution method of any one of claims 51 to 73, wherein the method comprises storing information about a specified medium class for each advertisement, the specification of video content class, and the advertisement slot class; and wherein

the step of judging a category also judges the information media class of the viewer terminal which made a viewing request, the video content class of the viewing request, and the corresponding advertisement slot class when performing a category judgment, and comprises providing beforehand an advertising list for the classes, and

the step of selecting the advertising list selects a class-dedicated advertising list for that class when a judgment is made that the above category is that class.

75. A program for causing a computer to execute the steps according to any one of the methods of claims 51 to 74.

76. An information-recording medium which can make the program of claim 75 computer-readable to execute the program.

77. An information-transmitting medium which can transmit the program of claim 75 within an information network to execute  
5 the program.